



INNOWEST 2009

Understanding the European innovation system: Can we do what they have done?

Richard Hawkins, PhD

Professor and

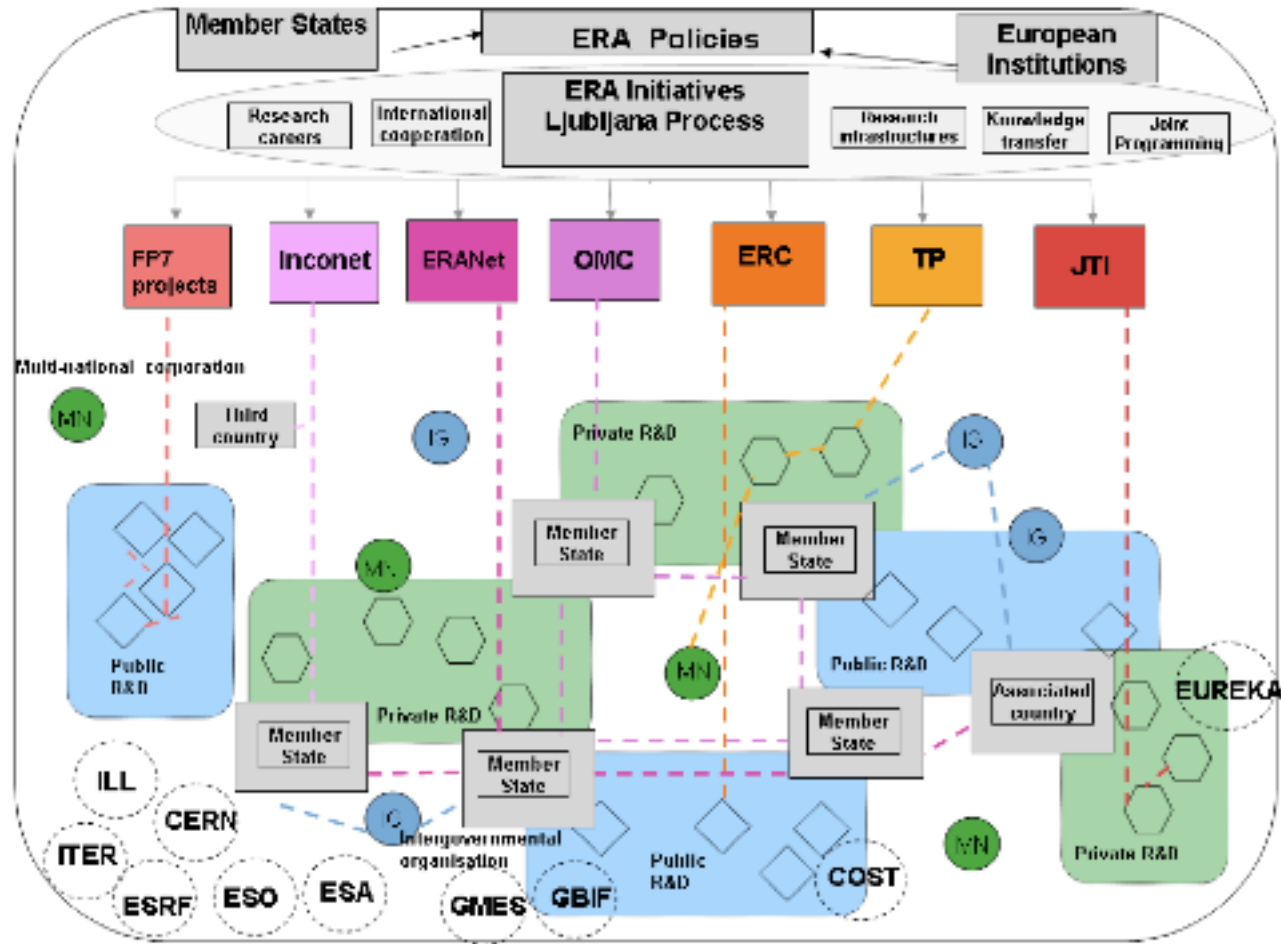
Canada Research Chair

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University of Calgary

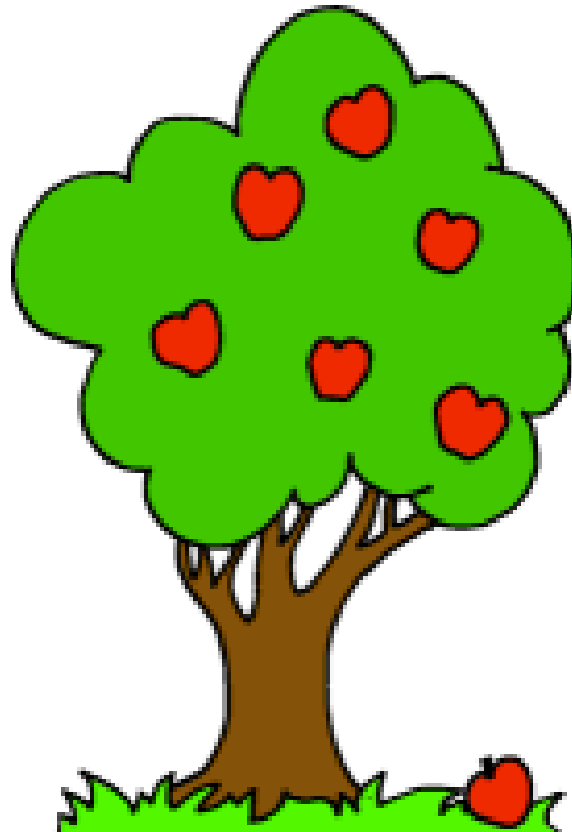
24 November 2009

... an impossibly complex matrix





...the fruit or the tree??





... a misguided approach

to look at **countries** apart from the **region**



... a misguided approach

to look at **countries** apart from the **region**

to look at **programs** apart from the **countries**



... a misguided approach

to look at **countries** apart from the **region**

to look at **programs** apart from the **countries**

to look at **companies** apart from **industries**

... a misguided approach

to look at **countries** apart from the **region**

to look at **programs** apart from the **countries**

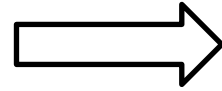
to look at **companies** apart from **industries**

A completely misleading picture!



the European strategy

National



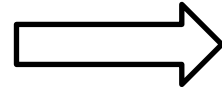
Supranational





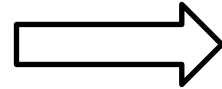
the European strategy

National



Supranational

Supranational

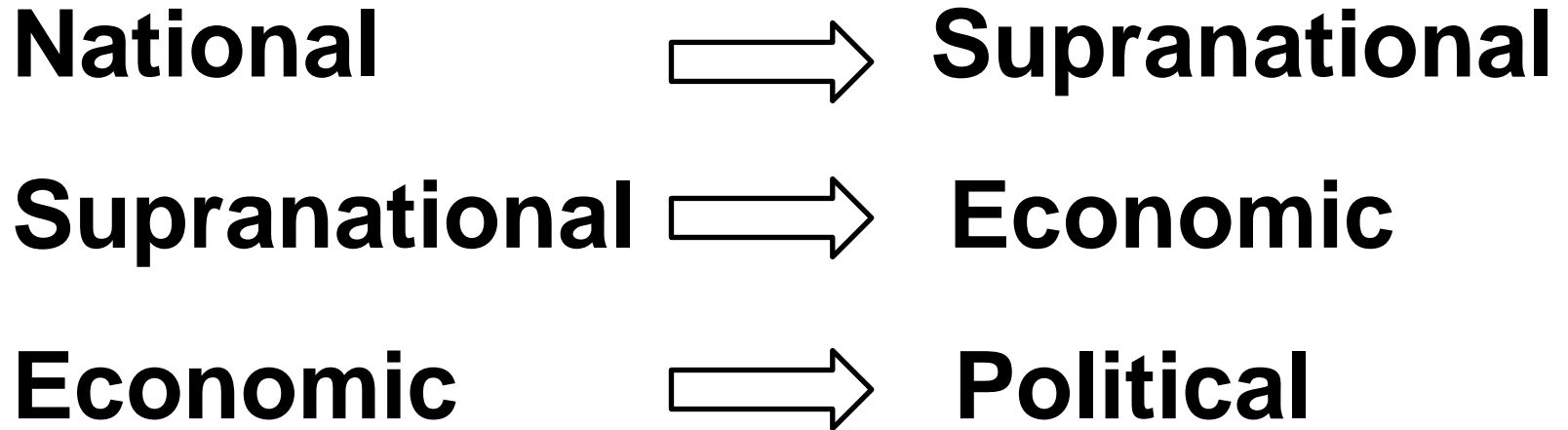


Economic



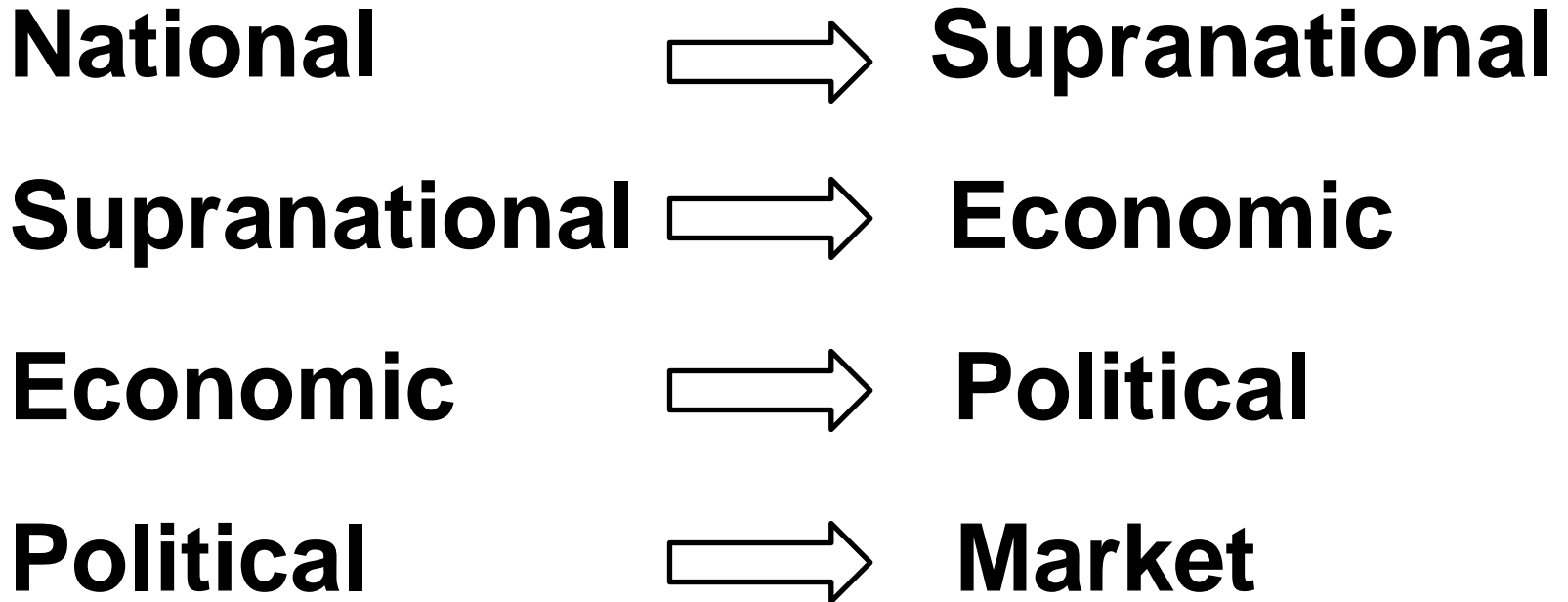


the European strategy



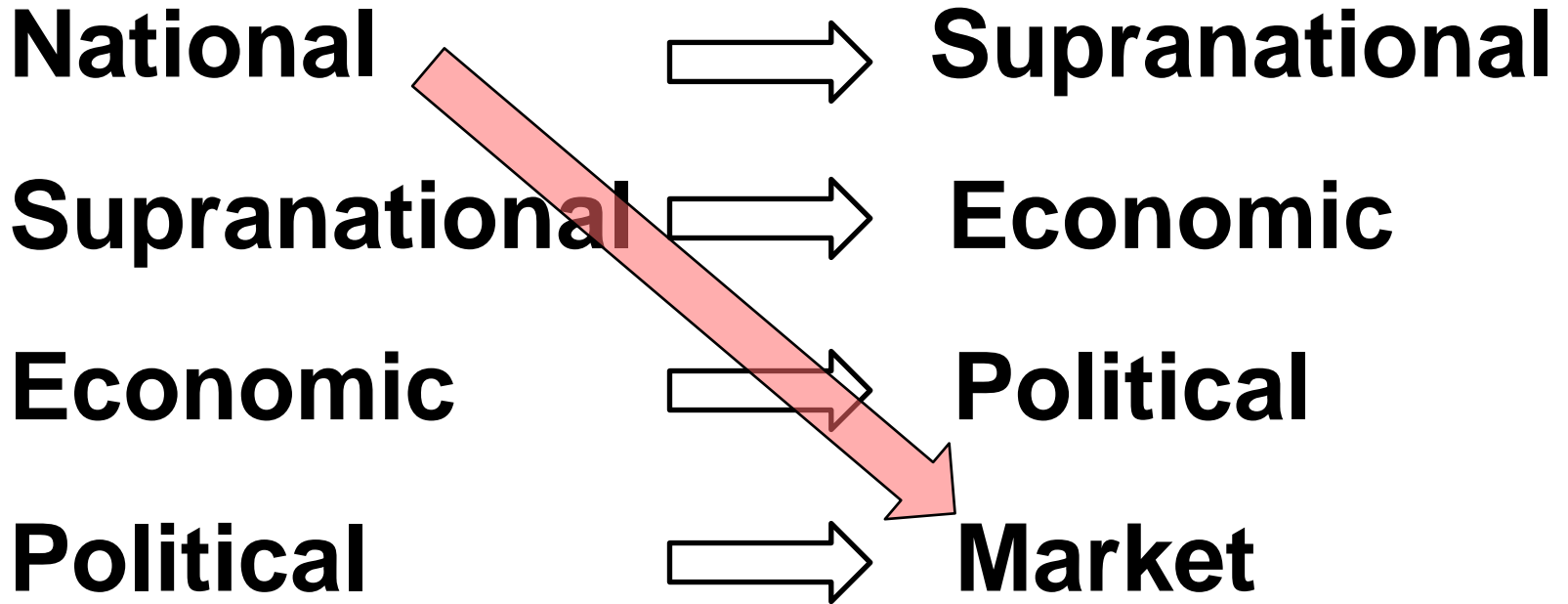


the European strategy



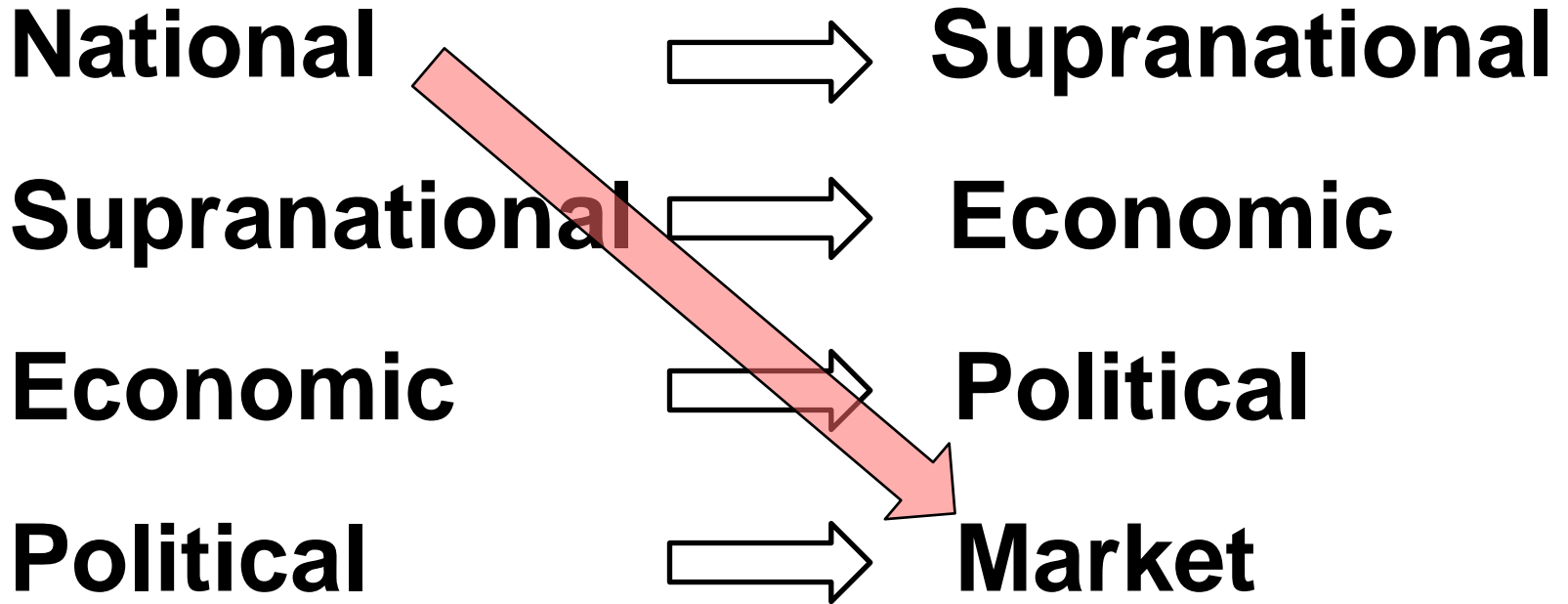


the European strategy





the European strategy



Industrial innovation



... enter the ERA

1945 –

1975 –

1995 –

2005 –

2010 –

ERA
< \$1bn





growth of the the ERA

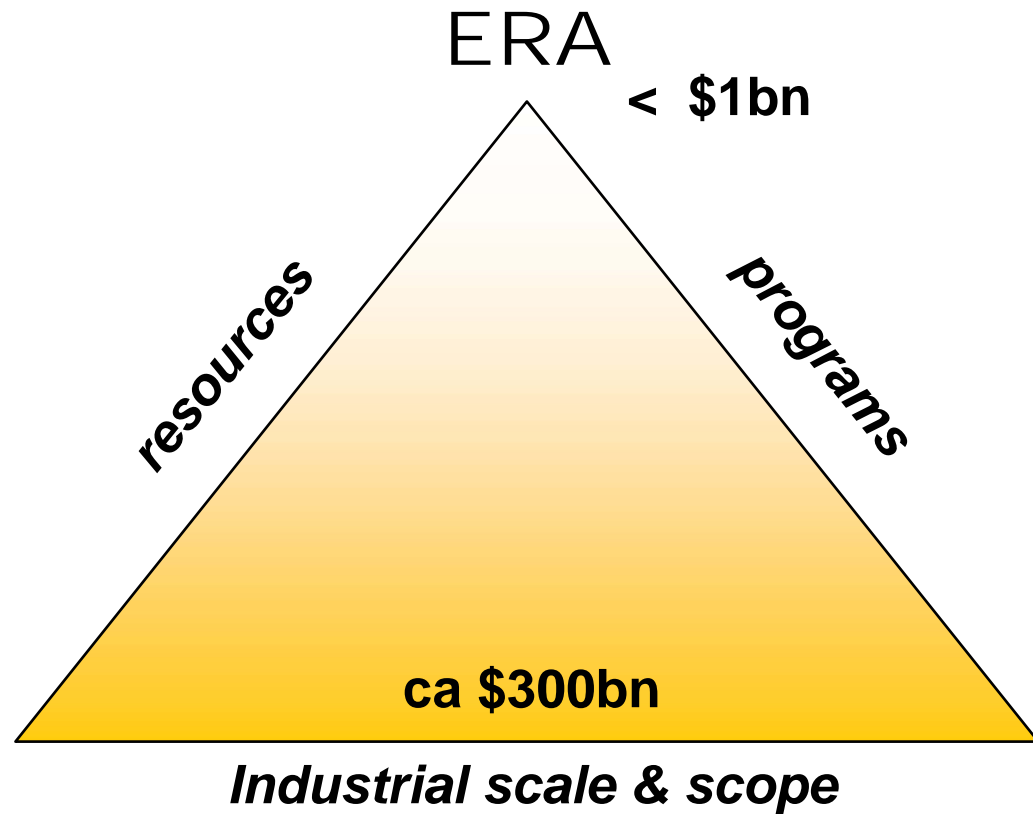
1945 –

1975 –

1995 –

2005 –

2010 –





the European “miracle”

1945 – utter devastation





the European “miracle”

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1975 – relative parity



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**1995 – single largest economic and
political complex in history**



the European “miracle”

1945 – utter devastation

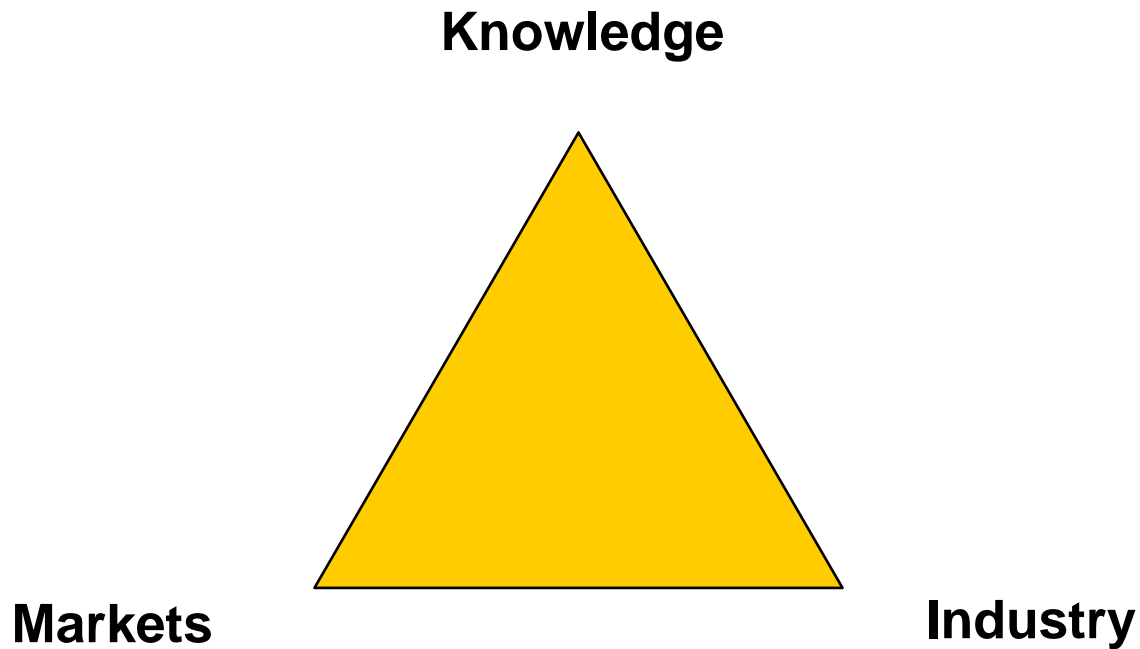
1975 – relative parity

**1995 – single largest economic and
political complex in history**

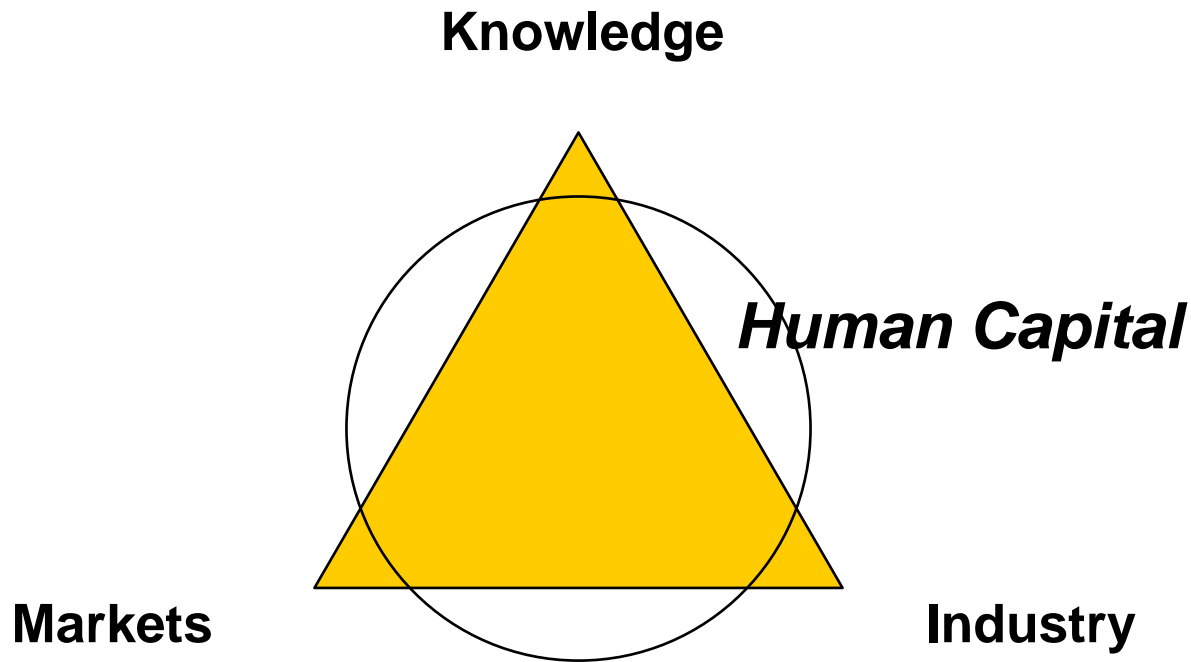
2005 – global leader in prosperity



the European innovation system

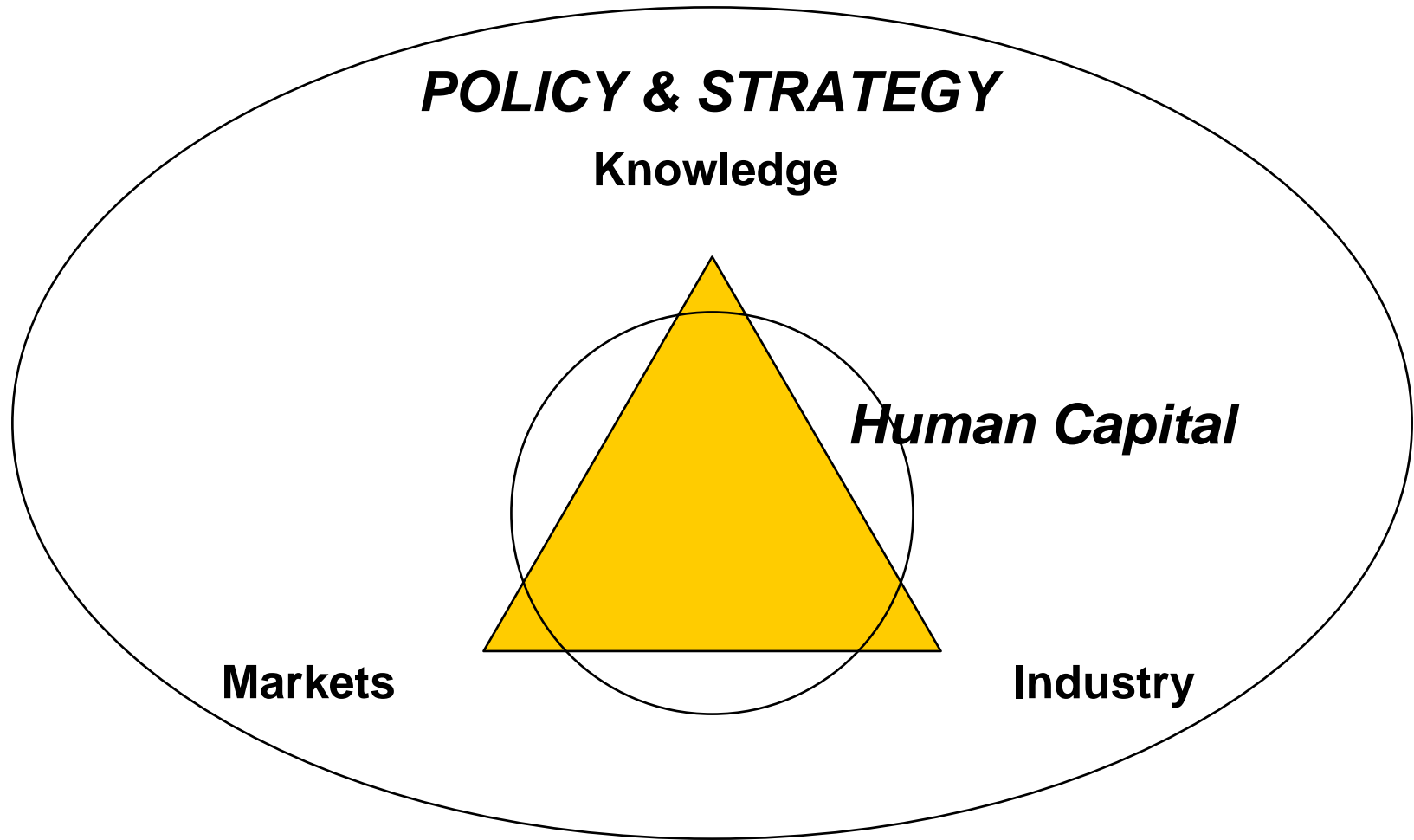


the European innovation system



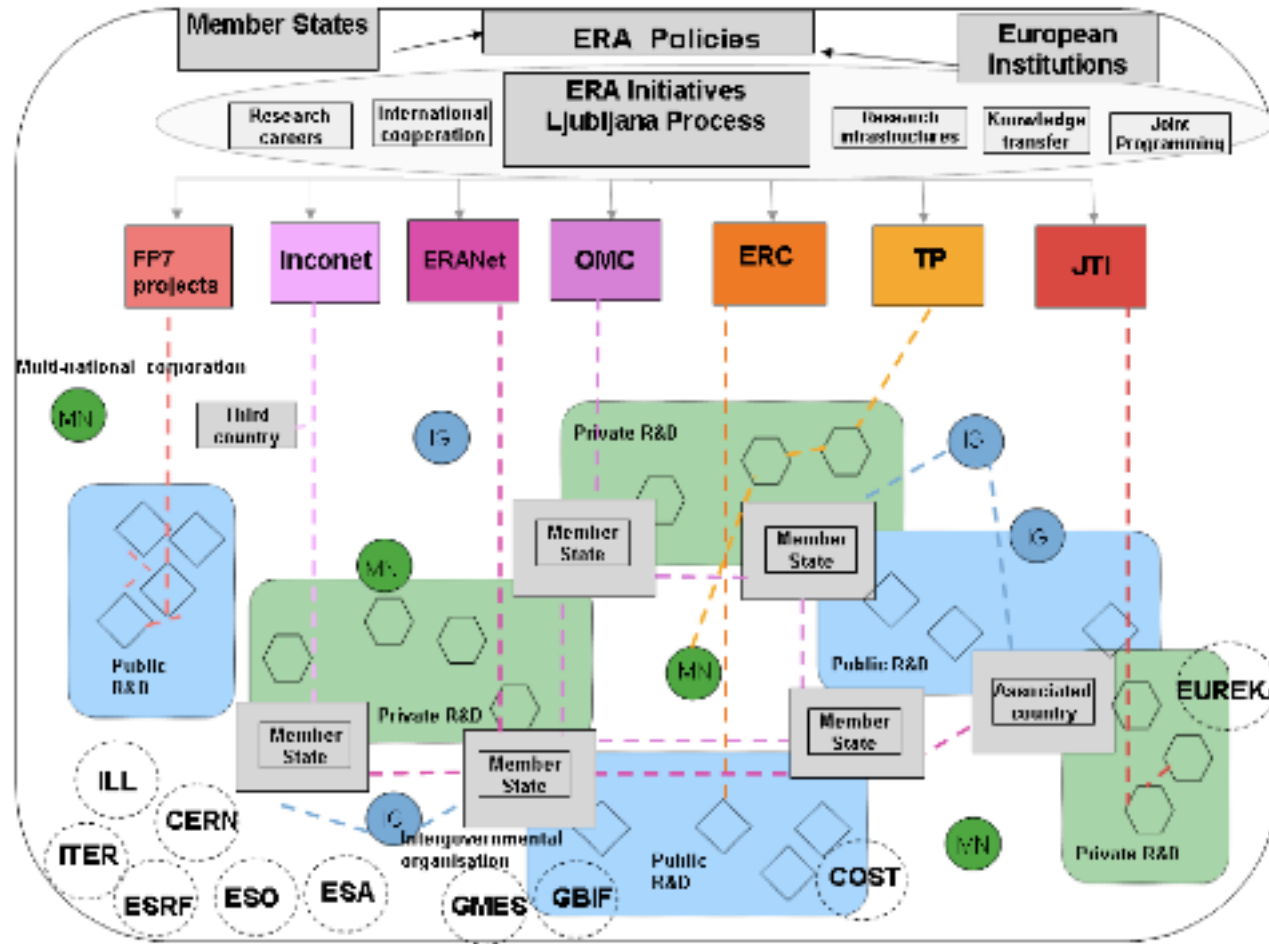


the European innovation system





... and that is how they got here



x 27

... transferring the “miracle”?

What do they do that we **also** do?

What do they do that we **do not** do?

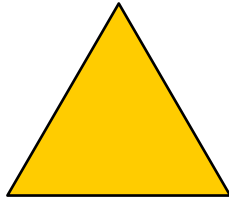
What do they do that we **could** do?

What do they do that we **cannot** do?



the Canadian innovation system

not



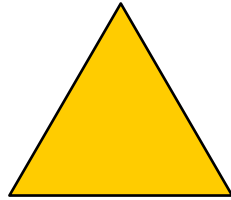
triadic network





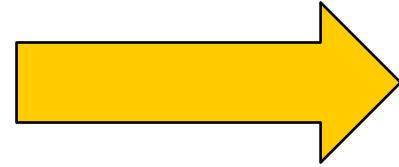
the Canadian innovation system

not



triadic network

...but



directional process





the Canadian innovation system

Knowledge

Industry



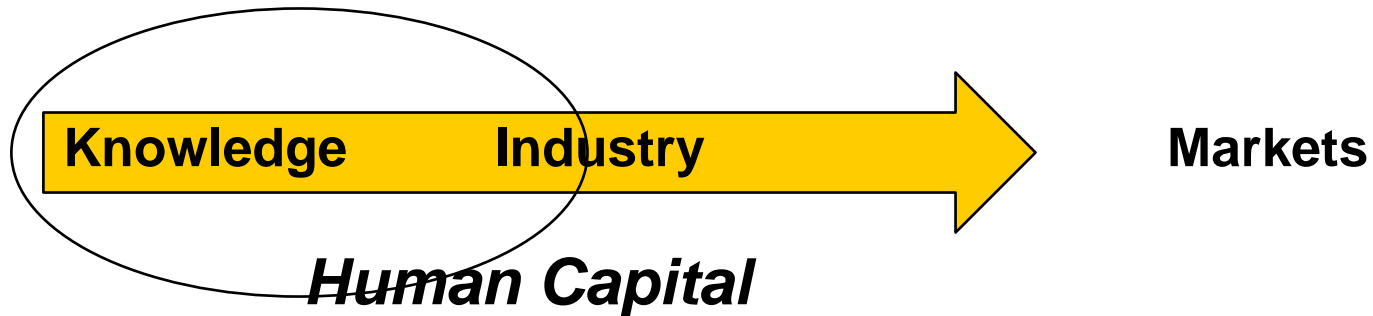


the Canadian innovation system



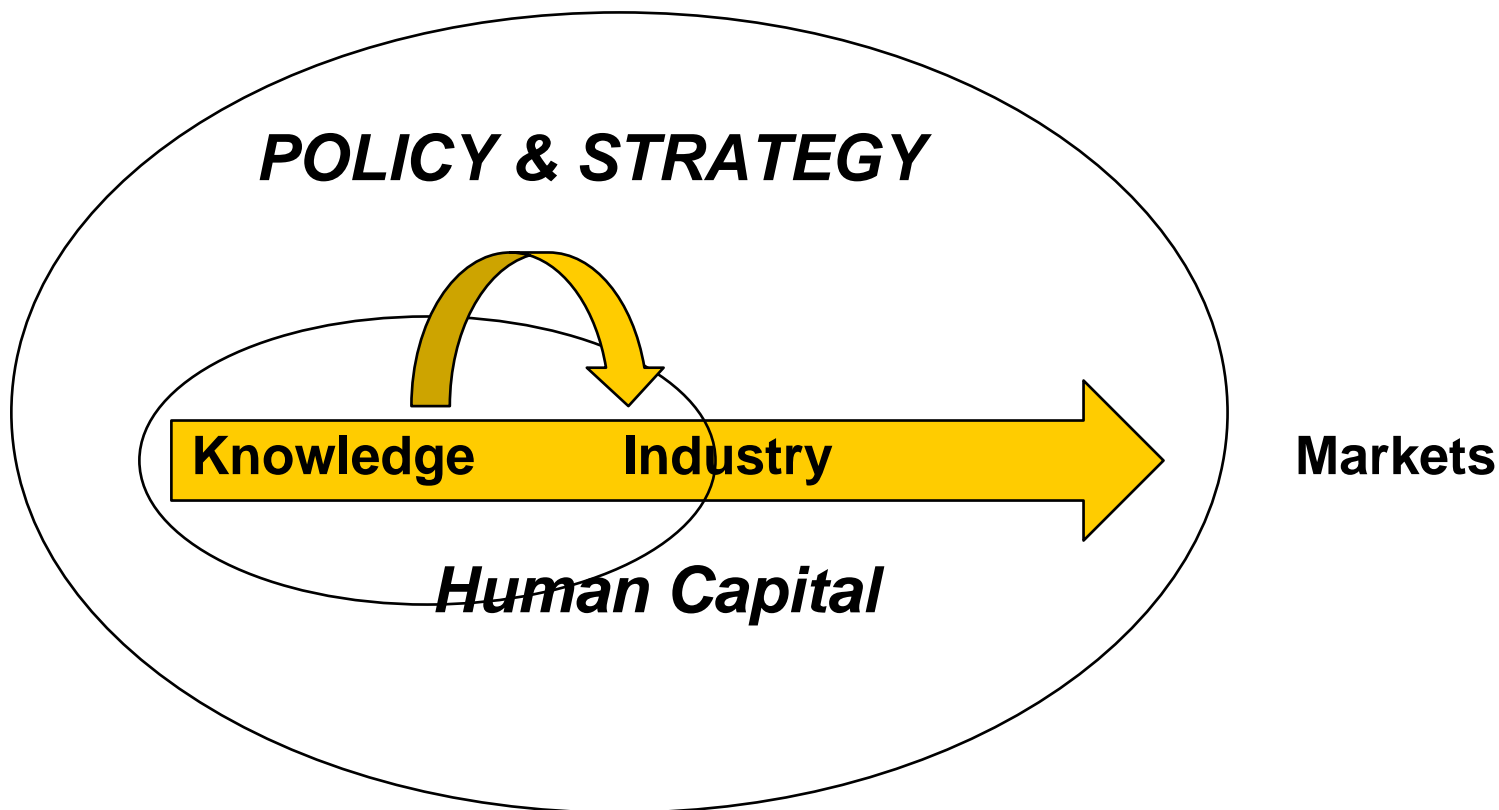


the Canadian innovation system





the Canadian innovation system





...what we both do

**Our GERD & BERD is roughly
proportional to the EU average (with
similar concentrations)**



...what we both do

Our GERD & BERD is roughly proportional to the EU average (with similar concentrations)

Public investment in innovation is spread among many jurisdictions

...what we both do

Our GERD & BERD is roughly proportional to the EU average (with similar concentrations)

Public investment in innovation is spread among many jurisdictions

We have basically the same range and types of institutions, programs and instruments



...the Red Queen effect?

**Systems change much faster than they
can learn from other systems**



...the Red Queen effect?

**Systems change much faster than they
can learn from other systems**

**Are we running flat out just to stay in
the same place?**





...what they do that we don't

They focus more on industries, **we**
focus more on companies



...what they do that we don't

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They aggregate and leverage resources
from different jurisdictions at an
industry level – **we don't**

...what they do that we don't

They focus more on industries, **we** focus more on companies

They aggregate and leverage resources from different jurisdictions at an industry level – **we don't**

They have a supra-jurisdictional “center of gravity” – **we don't**



the “Factor 10” dilution

Knowledge

Industry

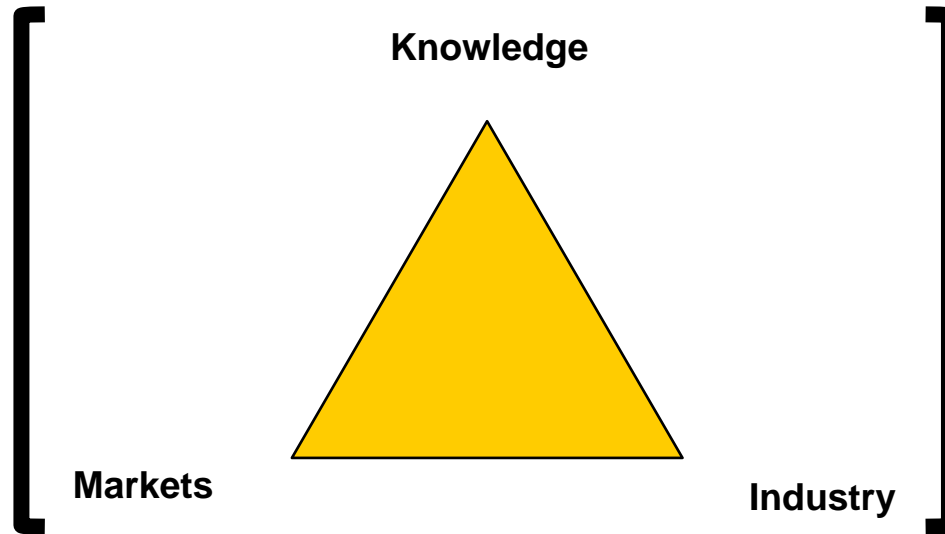
Markets

10



VS the “Factor 27” multiplication

27





...what they do that we could do

We could focus more on the industry level



...what they do that we could do

We could focus more on the industry level

We could aggregate, leverage and multiply S&T resources more effectively



...what they do that we could do

We could focus more on the industry level

We could aggregate, leverage and multiply S&T resources more effectively

IPFTA, but why not inter-provincial industry consortia ??

the EUREKA model

Large heterogeneous “licensed” R&D consortia funded as PPP

Bottom-up priority setting, partner IP retention

Each partner funded by an individual jurisdiction via any appropriate instrument

Oversight at multijurisdictional level, coordination at consortium level

the EUREKA model

Large heterogeneous “licensed” R&D consortia funded as PPP

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Downstream orientation – “one step from the market”

...what they do that we can not do

We can not achieve the same scale and scope

We cannot partner internally with large MNCs in virtually every sector



...what they do that we can not do

We can not achieve the same scale and scope

We cannot partner internally with large MNCs in virtually every sector

We have no constitutional mechanism to transfer resources to a supra-jurisdictional level



...what we should do

Exploit the **systemic analogues**
between the EU and Canada



...what we should do

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Stop **picking the fruit** and to learn how
to **grow the orchard**

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Agitate for “**EU associated**” status?
